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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,429	01/09/2004	Mark R. Harvie		8404

7590 10/08/2004

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EXAMINER

JIANG, CHEN WEN

ART UNIT PAPER NUMBER

3744

DATE MAILED: 10/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/754,429	HARVIE, MARK R.	
	Examiner	Art Unit	
	Chen-Wen Jiang	3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 and 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-13 and 20 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species C, Fig.8 (claims 1,2,3,4,5,9,10,11,12,13 and 20) in the reply filed on 8/26/2004 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,2,3,12 and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kushnir (WO 99/44552 equivalent to U.S. Patent Number 6,508,831).

Kushnir discloses a system and method for heat control of a living body. Fig.2 illustrates a garment for using in the system. Referring to Fig.8, the system comprises a vest 320, temperature sensors for body temperature, water temperature or core temperature, a cooling/heating unit 315 and controller 394. The cooling/heating device 315 may be a Peltier effect heat pump. FIG. 9 shows an algorithm, by way of blocked diagram, of the various computational steps of the algorithm operating in a processor in accordance with the embodiment of the system. The heat exchanger is typically flexible to allow it intimate contact

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with a body surface for efficient heat transfer therewith. The fluid inlet and outlet tubings are connectable to other parts in the system. Fig.6 is a similar system using hot and cold reservoirs.

4. Claims 1,2,3,11,12,13 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Rose et al. (U.S. Patent Number 5,755,275).

Rose et al. disclose a tubed-laminated heat transfer articles in the form of blankets or garments. Fig.2 shows a person 13, wearing a heating/cooling unit 12. The heating/cooling unit 12 can be person portable in nature for added mobility. The tubing 15 is connected to connector 18. A temperature sensor 41 is to measure the temperature of the user's skin and use that measurement for manual or automatic control liquid delivery temperature or flow rate to achieve the desired result.

5. Claims 1,4,9,10, and 13 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Abadilla et al. (U.S. Patent Number 5,564,276).

Abadilla et al. disclose a micro-climate conditioning unit. Referring to Fig.1, the unit comprises a thermoelectric stack 10, a heat exchanger 11, a first fluid pump 12, a second fluid pump 13, a temperature controller 14, and a temperature controlled element 15. Referring to Fig.6, a power source provides a 12 volt DC positive lead 44 and return or ground 45. A power switch 48 is provided near the positive lead 44, so that when the power switch 48 is closed it provides power to the fan 38, first fluid pump 12, second fluid pump 13, and the temperature controller 14. In operation, the power switch 48 is closed to provide power to the fan 38, first fluid pump 12, second fluid pump 13, and the temperature controller 14. This causes the first fluid pump 12 to pump fluid through the first fluid circuit and the second fluid pump to pump

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fluid through the second fluid circuit. The fluid in the first fluid circuit goes from the first fluid pump 12 to channels 25 adjacent to first temperature surfaces, to the temperature controlled element 15, through the temperature controller, and then back to the first fluid pump 12. The fluid in the second fluid circuit goes from the second fluid pump 13 to the channels 25 adjacent to the second temperature surfaces, to the heat exchanger 11 and then back to the second fluid pump 13. The means for determining whether the temperature controlled element requires heating or cooling and applying a voltage across the thermoelectric stack to provide the required heating or cooling to the temperature controlled element, electrically connected to the thermoelectric stack and the power source, and wherein the heating occurs by flowing current through the thermoelectric stack in a first direction and cooling occurs by flowing current through the thermoelectric stack in a second direction which is the reverse of the first direction. The thermoelectric material is a quaternary alloy of bismuth, tellurium, selenium, and antimony.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kushnir (WO 99/44552) in view of Bayes et al. (U.S. Patent Number 5,092,129) or Frantti (U.S. Patent Number 3,085,405).

Kushnir discloses the invention substantially as claimed. However, Kushnir does not disclose the system attached to a carrier. Bayes et al. and Frantti disclose the system attached to a carrier in the same field of endeavor for the purpose of portable. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus of Kushnir with a carried system in view of Bayes et al. or Frantti so as to improve portability.

Allowable Subject Matter

8. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jenkins (U.S. Patent Number 5,967,225) is made of record as a body heating/cooling apparatus having quick-connect valves.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chen-Wen Jiang whose telephone number is (703) 308-0275 (571 272-4809 after 11/20/2004). The examiner can normally be reached on Tuesday-Friday from 7:00 to 5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel can be reached on (703) 308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chen-Wen Jiang
Primary Examiner

A handwritten signature in black ink, appearing to be 'C. W. Jiang', written in a cursive style.